

WHAT IS CLAIMED IS:

1. A computer-implemented method for debugging code using a debugger comprising one or more interfaces for specifying debugger operations and displaying debug information, the method comprising:
 - at a halted position in the code:
 - accessing, via the debugger, a debug history repository comprising a plurality of history records each containing data describing code state information for a previously-encountered given state of the code;
 - determining whether a current state of the code matches a previously-encountered given state described in a history record in the debug history repository; and
 - providing an indication of the match to a user via the one or more interfaces whereby the user is allowed to view debug information contained in the history record corresponding to the match, the debug information describing at least an aspect of the previously-encountered given state.
2. The method of claim 1, wherein the given state of the code is one at which the code was halted following execution.
3. The method of claim 1, wherein providing the user the indication of the match comprises displaying a selectable graphical element which, when selected by the user through an input device, reveals the debug information contained in the history record corresponding to the match.
4. The method of claim 1, wherein the debugger and debug history repository are part of a distributed environment.
5. The method of claim 1, wherein the code is selected from the group consisting of procedural program code, object oriented program code, and combinations thereof.

6. The method of claim 1, wherein the given state of the code is defined at least in part by a debugger control point encountered during execution of the code and having caused the code to be stopped by the debugger at the halted position.

7. The method of claim 1, wherein the given state of the code is defined at least in part by an evaluation of a variable, the evaluation having been performed at the request of the user at the halted position.

8. The method of claim 7, wherein providing the user the indication of the match comprises displaying a series of previously performed variable evaluations performed during a previous stoppage of the code at the halted position.

9. A computer-implemented method for debugging code using a debugger comprising one or more interfaces for specifying debugger operations and displaying debug information, the method comprising:

- at a halted position in the code:
 - accessing, via the debugger, a debug history repository comprising a plurality of history records each containing (i) data describing code state information for a given state of the code while stopped at a halted position and (ii) data describing a series of variable evaluations performed during a stoppage at a position in the code;
 - performing at least one evaluation of one or more variables in the code;
 - and
 - for each evaluation: (i) determining whether a current state of the code matches a given state described in a history record in the debug history repository; and (ii) if so, providing a user an indication of the match via the one or more interfaces.

10. The method of claim 9, wherein providing the user the indication of the match comprises displaying a selectable graphical element which, when selected by the user through an input device, reveals the debug information contained in the history record corresponding to the match.

11. The method of claim 9, wherein providing the user the indication of the match comprises displaying the data describing the series of variable evaluations contained in the history record corresponding to the match.

12. The method of claim 9, wherein providing the user the indication of the match comprises displaying a selectable graphical element which, when selected by the user through an input device, reveals debug information contained in the history record corresponding to the match.

13. The method of claim 12, wherein the debug information comprises user commentary.

14. The method of claim 12, wherein the debug information comprises user commentary describing debugging operations performed during a previous stoppage of the code while in a state matching the current state.

15. The method of claim 9, further comprising, after performing the at least one evaluation, displaying a user interface configured to allow the user to create a history record for the at least one evaluation.

16. The method of claim 15, wherein the user interface is configured to allow the user to specify a state to be associated with the history record to be created.

17. The method of claim 15, wherein the at least one evaluation comprises a plurality of evaluations and wherein the user interface displays the plurality of evaluations as selectable items from which the user is allowed to select in order to designate one of the plurality of evaluations as a primary state for the history record to be created, wherein the primary state is used to determine a match between the history record to be created and a subsequent state at a subsequent halted position in the code.

18. A computer readable medium containing a debugger program which, when executed, performs an operation to facilitate debugging of code, the operation comprising:

- collecting state information related to the current stopped position;
- querying a debug history repository to determine whether a current state of the code matches a given state described in a history record in the debug history repository; and
- if so, providing a user an indication of the match via the one or more interfaces.

19. The computer readable medium of claim 18, wherein the debugger program allows a user to enter a new record in the debug history repository if a matching record is not found.

20. The computer readable medium of claim 18, wherein the debugger program automatically creates a new record in the debug history repository if a matching record is not found.

21. The computer readable medium of claim 18, wherein the state information is defined at least in part by the evaluation of one or more variables, the evaluation having been performed at the request of the user at the halted position.

22. The computer readable medium of claim 18, wherein the debug history repository is queried using filters selected from the group consisting of developer name, time, and combinations thereof.

23. A computer system for debugging code, comprising:

- a debug history repository comprising a plurality of history records each containing data describing code state information for a given state of the code under debug;
- a debugger comprising one or more interfaces for specifying debugger operations and displaying debug information; wherein the debugger is configured to:

create the plurality of history records in the debug history repository;
access the plurality of history records in the debug history repository;
determine, at a given halted position in the code, whether a current
state of the code matches a given state described in a history record of the
plurality of history records; and
if a matching state is determined, provide a user an indication of the
match via the one or more interfaces whereby the user is allowed to view
debug information contained in the history record corresponding to the match.

24. The system of claim 23, wherein the repository is a database selected
from the group consisting of a relational database, object-relational database,
XML database, and combinations thereof.

25. The system of claim 23, wherein the debugger queries the debug
history repository based on available current state information.

26. The system of claim 23, wherein the one or more interfaces comprise a
graphical user interface.

27. The system of claim 23, wherein debugger is configured to provide the
user the indication of the match by displaying a selectable graphical element
which, when selected by the user through an input device, reveals debug
information contained in the history record corresponding to the match.

28. The system of claim 27, wherein the debug information comprises user
commentary.

29. The system of claim 27, wherein the debug information comprises user
commentary describing debugging operations performed during a previous
stoppage of the code while in a state matching as the current state.

30. The system of claim 23, wherein each history record further contains
data describing a series of variable evaluations performed during a stoppage
at a position in the code.

31. The system of claim 30, wherein the debugger is further configured to perform at least one evaluation of one or more variables in the code at the halted position; and wherein the debugger performs the determination of whether the current state of the code matches a given state described in a history record for each evaluation; and wherein, if the matching state is determined and the indication of the match provided, the user is allowed to view the data contained in the history record corresponding to the match and describing the series of variable evaluations performed during the stoppage at a position in the code.

32. The system of claim 30, wherein the history record corresponding to the match further comprises user commentary.

33. The system of claim 30, wherein the history record corresponding to the match further comprises user commentary describing debugging operations performed during a previous stoppage of the code while in a state matching the current state.

34. The system of claim 30, wherein the debugger is configured to display a user interface configured to allow the user to create a history record for the at least one evaluation.

35. The system of claim 34, wherein the user interface is configured to allow the user to specify a state to be associated with the history record to be created.

36. The system of claim 34, wherein the at least one evaluation comprises a plurality of evaluations and wherein the user interface displays the plurality of evaluations as selectable items from which the user is allowed to select in order to designate one of the plurality of evaluations as a primary state for the history record to be created, wherein the primary state is used to determine a match between a state described by code state information contained in the

history record to be created and a subsequent state at a subsequent halted position in the code.

37. The system of claim 34, wherein the at least one evaluation comprises a plurality of evaluations and wherein the user interface displays the plurality of evaluations as selectable items from which the user is allowed to select in order to designate which of the plurality of evaluations are to be included in the history record to be created.